

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Philippe ROUAULT

Serial No. (unknown)

Filed herewith

METHOD AND SYSTEM FOR SOLVING  
A PROBLEM ARISING DURING A  
WELDING OPERATION OR THE LIKE

PRELIMINARY AMENDMENT

Commissioner for Patents

Washington, D.C. 20231

Sir:

Prior to the first Official Action and calculation of the filing fee, please amend the above-identified application as follows:

IN THE ABSTRACT:

Cancel the abstract as filed and add the abstract attached hereto.

IN THE CLAIMS:

Claims 3-10, 13 and 14 have been amended as follows:

--3. (amended) Method according to claim 1, characterized in that it includes at least one additional step:

(f) of displaying, storing, printing, transmitting, interpreting and/or exporting at least some information obtained in step (e) or in step (d'); and/or

(g) of modifying or setting at least one configuration parameter, preferably several configuration parameters,

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of the said heat treatment process according to at least some information obtained in step (e) or in step (d').--

--4. (amended) Method according to claim 1, characterized in that in step (a) or (a'), the type of heat treatment process implemented or to be implemented is chosen or selected from the group formed by cutting processes, welding processes, marking processes, heat spraying processes and combinations thereof.--

--5. (amended) Method according to claim 1, characterized in that in steps (a), (b) and/or (c) or (a') and/or (b'), the indication or the selection is made by the user via data or information acquisition and/or selection means.--

--6. (amended) Method according to claim 1, characterized in that, in step (f), the display is made on a touchscreen.--

--7. (amended) Method according to claim 1, characterized in that, in step (b) or in step (b'), the type of technical problem to be solved is a problem relating to:

- the choice of the consumables, the parameters of the process, the setting of a piece of equipment or of a fitting;

- health or safety;
- malfunction of a piece of equipment or a fitting;
- the productivity of the process;
- the quality of the work produced.--

--8. (amended) Method according to claim 1, characterized in that in step (c) or in step (b'), at least one configuration parameter of the said heat treatment process is chosen from the voltage, the current, the feed rate of the filler wire, the speed of advance or welding speed, the nature of the filler wire or electrode, the nature of the shielding gas, its flow rate and/or its quality, the choice of solid flux associated with the wire in submerged-arc welding, the orientation and position of the welding torch with respect to the weld to be produced, the preparation and the thickness of the workpieces to be joined together or, in the case of cutting, the cutting speed and/or the gas used.--

--9. (amended) Method according to claim 1, characterized in that in step (d) or in step (c'), the processing of the indications or selections made by the user comprises:

(i) a comparison of the said indications or selections with reference information stored in at least one database or databank,

(ii) a proposal of at least one solution, of an explanation and/or of an answer to a question raised, the said solution, explanation and/or answer being stored in at least one database or databank.--

--10. (amended) Method according to claim 1, characterized in that a module for the automatic acquisition of the welding parameters and for the transmission of the said

welding parameters to a display screen is incorporated, allowing at least one of the said welding parameters to be displayed.--

--13. (amended) System according to claim 11, characterized in that the link between the user station and the central server comprises a remote communication network or line, especially the Internet network.--

--14. (amended) System according to claim 11, characterized in that it includes data transmission means allowing the choices or selections made by the user by means of the information acquisition and/or selection means to be transmitted to the said central server.--

R E M A R K S

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Respectfully submitted,

YOUNG & THOMPSON

By



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# ABSTRACT OF THE DISCLOSURE

A method and a system for diagnosing and/or solving, in particular remotely, a given technical problem likely to arise before, during or after a heat treatment operation on metals, in particular in the welding or cutting field, and to provide the most suitable solution thereto, and to do so by minimizing the time needed to solve this problem and therefore by reducing the loss of productivity likely to occur because of this technical problem.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 3-10, 13 and 14 have been amended as follows:

--3. (amended) Method according to ~~either of Claims~~ ~~claim 1 and 2~~, characterized in that it includes at least one additional step:

(f) of displaying, storing, printing, transmitting, interpreting and/or exporting at least some information obtained in step (e) or in step (d'); and/or

(g) of modifying or setting at least one configuration parameter, preferably several configuration parameters, of the said heat treatment process according to at least some information obtained in step (e) or in step (d').--

--4. (amended) Method according to ~~one of Claims~~ ~~claim 1 to 3~~, characterized in that in step (a) or (a'), the type of heat treatment process implemented or to be implemented is chosen or selected from the group formed by cutting processes, welding processes, marking processes, heat spraying processes and combinations thereof.--

--5. (amended) Method according to ~~one of Claims~~ ~~claim 1 to 4~~, characterized in that in steps (a), (b) and/or (c) or (a') and/or (b'), the indication or the selection is made by the user via data or information acquisition and/or selection means.--

--6. (amended) Method according to ~~one of Claims~~  
~~claim 1 to 5~~, characterized in that, in step (f), the display  
is made on a touchscreen.--

--7. (amended) Method according to ~~one of Claims~~  
~~claim 1 to 6~~, characterized in that, in step (b) or in step  
(b'), the type of technical problem to be solved is a problem  
relating to:

- the choice of the consumables, the parameters of  
the process, the setting of a piece of equipment or of a  
fitting;

- health or safety;
- malfunction of a piece of equipment or a fitting;
- the productivity of the process;
- the quality of the work produced.--

--8. (amended) Method according to ~~one of Claims~~  
~~claim 1 to 7~~, characterized in that in step (c) or in step  
(b'), at least one configuration parameter of the said heat  
treatment process is chosen from the voltage, the current, the  
feed rate of the filler wire, the speed of advance or welding  
speed, the nature of the filler wire or electrode, the nature  
of the shielding gas, its flow rate and/or its quality, the  
choice of solid flux associated with the wire in submerged-arc  
welding, the orientation and position of the welding torch  
with respect to the weld to be produced, the preparation and  
the thickness of the workpieces to be joined together or, in  
the case of cutting, the cutting speed and/or the gas used.--

--9. (amended) Method according to ~~one of Claims~~  
~~claim 1 to 8~~, characterized in that in step (d) or in step  
(c'), the processing of the indications or selections made by  
the user comprises:

(i) a comparison of the said indications or selections with  
reference information stored in at least one database or  
databank,

(ii) a proposal of at least one  
solution, of an explanation and/or of an answer to a question  
raised, the said solution, explanation and/or answer being  
stored in at least one database or databank.--

--10. (amended) Method according to ~~one of~~  
~~Claims~~~~claim 1 to 9~~, characterized in that a module for the  
automatic acquisition of the welding parameters and for the  
transmission of the said welding parameters to a display  
screen is incorporated, allowing at least one of the said  
welding parameters to be displayed.--

--13. (amended) System according to ~~either of~~  
~~Claims~~~~claim 11 and 12~~, characterized in that the link between  
the user station and the central server comprises a remote  
communication network or line, especially the Internet  
network.--

--14. (amended) System according to ~~one of~~  
~~Claims~~~~claim 11 to 13~~, characterized in that it includes data  
transmission means allowing the choices or selections made by



the user by means of the information acquisition and/or  
selection means to be transmitted to the said central server.-

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